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AUTHOR Kalodner, Cynthia R.; DeLucia, Janice L.
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ABSTRACT

The efficacy of behavioral weight loss programs has been systematically evaluated during active treatment and at follow-up intervals. Despite repeated calls for more comprehensive assessment of change, other sources of information about change in behavior, nutritional habits, and thinking patterns are often neglected. These studies examined the behavioral and cognitive changes that occurred during and after participation in behaviorally oriented weight loss programs. Cognitive, behavioral, nutritional, and social support treatments were utilized to explore potential differential effects. In the first study, subject (N=47) were blocked on sex and weight and then randomly assigned to one of two treatments: a behavioral treatment alone or a combined behavioral and cognitive treatment. In the second study, subjects (N=51) were blocked on sex and weight and then randomly assigned to one of four treatments: a behavioral treatment and social support; a combined behavioral and cognitive treatment; a combined behavioral and nutritional treatment; or a combined behavioral, cognitive, and nutritional treatment. The results indicated that once treatment stopped there was no further statistically significant change in behavior and/or thinking patterns. The curves of behavioral and cognitive measures were similar to the weight loss curves, suggesting that there may be some correlation between degree of continuation of new behaviors and thinking patterns and degree of continued weight loss. (ABL)

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MAINTENANCE OF COGNITIVE AND BEHAVIORAL CHANGE FOLLOWING WEIGHT LOSS PROGRAMS: TWO EXAMPLES

Cynthia R. Kalodner

The University of Akron

Janice L. DeLucia

Purdue University

CG 022148

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The efficacy of behavioral weight loss programs has been systematically evaluated during active treatment and at follow-up intervals. Most often, these results are reported only in terms of physiological changes, such as pounds lost or changes in percentage of body fat. Despite repeated calls for more comprehensive assessment of change, other sources of information about changes in behavior, nutritional habits, and thinking patterns are often neglected.

Moreover, a premise of behavioral treatments is that once a person learns new skills, then they no longer need treatment. The assumption is made that people will continue the new behaviors they have learned after treatment ends. Research does not support this idea with regard to weight loss; participants lose weight as long as they are in treatment. This study will examine how eating behaviors and thinking patterns change as a result of treatment and after treatment ends.

The purpose of this research is to examine the behavioral and cognitive changes that occur during and after participation in behaviorally oriented weight loss programs. Two studies will be presented that present patterns of change three and six months after active treatment ends. Cognitive, behavioral, nutritional, and social support treatments were utilized to explore potential differential effects.

METHODS

STUDY 1

Subjects & Procedures. Sixty-three subjects recruited through university newsletters and cable television advertisements started the program; 47 subjects completed a 10-week weight loss program and a 3-month follow-up visit.

Treatment. Subjects were blocked on sex and weight and then randomly assigned to one of two treatments: a behavioral treatment alone or a combined behavioral and cognitive treatment.

Behavioral techniques focus on changing how a person interacts with food.

The premise is that individuals have learned to pair food with a variety of stimuli, other than hunger. The goal is to help people unlearn these paired associations and learn to eat when they are hungry and stop eating when they are full.

Cognitive therapy as a weight loss intervention focuses on changing the maladaptive patterns of thinking that lead to overeating or underuse of behavioral and nutritional techniques. The idea is that individuals may tell themselves things that are negative and self-defeating which lead to overeating (e.g., you are fat and you will always be fat, you are genetically fat and so no matter what you do, you won't be skinny) (DeLucia & Kalodner, in press).

STUDY 2

Subjects & Procedures. Sixty-nine subjects recruited through university newsletters and cable television advertisements started the program; 51 subjects completed a 10-week weight loss program and 3-month and 6-month follow-up visits.

Treatment. Subjects were blocked on sex and weight and then randomly assigned to one of four treatments: a behavioral treatment and social support (to control for time), a combined behavioral and cognitive treatment, a combined behavioral and nutritional treatment, or a combined behavioral, cognitive, and nutritional treatment.

The purpose of nutritional education is to provide individuals with information about nutrition and caloric values so that they can make informed choices about what they eat and how they lose weight. Information about RDA's of vitamins and minerals and how to meet these needs is important, also what kinds of "diets" to avoid and their effects on the body.

The social support intervention included unstructured discussion that focused on how things were going in other areas of the individuals' lives. The rationale given for this treatment was that if we get to know each other better

than we will be able to work more cooperatively. This treatment served as a control for time as a factor against the "active" treatments (Kalodner & DeLucia, in submission).

RESULTS

STUDY 1

Repeated measures MANOVA's revealed no significant differences between treatment groups (behavioral treatment alone, combined behavioral & cognitive treatments) on 3 sets of measures: physiological, cognitive, and behavioral.

Subjects changed significantly in their responses to the behavioral measures over time. Significant differences were found between pretest and posttest and pretest and follow-up scores on the Master Questionnaire (MQ; Straw et al, 1984) stimulus control and usage of behavioral techniques. Scores on the MQ energy balance subscale were significantly different from pretest to follow-up, but not between the beginning and end of treatment (see Tables 1 & 2).

Results for the cognitive measures were similar: MQ hopelessness, motivation, physical attribution, and Negative thoughts about weight loss questionnaire were significantly different between pre and posttest, and pretest and follow-up (see Tables 3 & 4).

STUDY 2

Repeated measures indicated no significant main effects for treatments or a treatment by time interaction between the four treatment groups (behavioral treatment & social support, combined behavioral & cognitive treatment, combined behavioral, cognitive, & nutritional, or combined behavioral & nutritional treatment) on 3 sets of measures: physiological, cognitive, and behavioral.

There was a significant time main effect on the behavioral measures; means for usage of behavioral techniques and MQ stimulus control changed significantly over time. All time points for usage of behavioral techniques were significantly different from each other; the pretest mean for MQ stimulus

control differed significantly from all other time points.

There was a significant main effect for cognitive treatment on cognitive measures. Individuals receiving cognitive treatment scored higher on MQ motivation and physical attribution scales (see Tables 5 & 6).

There was a significant main effect for time on cognitive measures. Scores for MQ hopelessness, motivation, and physical attribution, Negative thoughts about weight loss questionnaire, Eating Self-efficacy scale negative affect and social acceptability (Glynn & Ruderman, 1986) all changed significantly over time. Pretest scores were significantly different from all other time points for all measures.

DISCUSSION

In Study 1, pretest scores differed significantly from posttest and the 3-month follow-up scores. For Study 2, pretest scores differed significantly from posttest and both follow-up scores. However, posttest and follow-up scores consistently did not differ from each other.

The results of Study 1 indicate that individuals change their eating behaviors and cognitions related to weight loss (see Table 11). This decreasing slope is similar to the slope of weight loss found in this study, with individuals having lost an additional 2 lb at the 3-month follow-up. However, once the treatment stops there is no more statistically significant change in behavior and/or thinking patterns.

The curves of the behavioral and cognitive measures are similar to the weight loss curves, suggesting that there may be some correlation between degree of continuation of new behaviors and thinking patterns and degree of continued weight loss.

Something that is also interesting and somewhere may be related to self-efficacy is that regardless of the treatment that individuals received (some combination of behavioral techniques with cognitive or nutritional therapy), the curves were still similar. While some may appear to have changed

more drastically when graphed, differences were all nonsignificant.

The behavioral and cognitive data looks remarkably like the physiological data, with the same interventions being called for. Introduction of more effective relapse prevention strategies at the end of treatment, development of a booster session program that individuals will continue to participate in, and/or longer treatment may be necessary to facilitate further weight loss among obese individuals.

References

DeLucia, J.L., & Kalodner, C.R. (in press). The addition of a cognitive intervention based on individualized assessment to a behavioral intervention for obesity. Addictive Behaviors.

Glynn, S.M., & Ruderman, A.J. (1986). The development and validation of an eating self-efficacy scale. Cognitive Therapy and Research, 10, 403-420.

Kalodner, C.R., & DeLucia, J.L. (1989). An evaluation of the independent and combined contributions of cognitive therapy and nutrition education to a behavior modification program for weight loss. Manuscript in submission.

Straw, M.K., Straw, R.B., Mahoney, M.J., Rogers, T., Mahoney, B.K., Craighead, L.W., & Stunkard, A.J. (1984). The Master Questionnaire: Preliminary report on an obesity assessment device. Addictive Behaviors, 9, 1-10.

Study 1
Master Questionnaire
Behavioral Scales

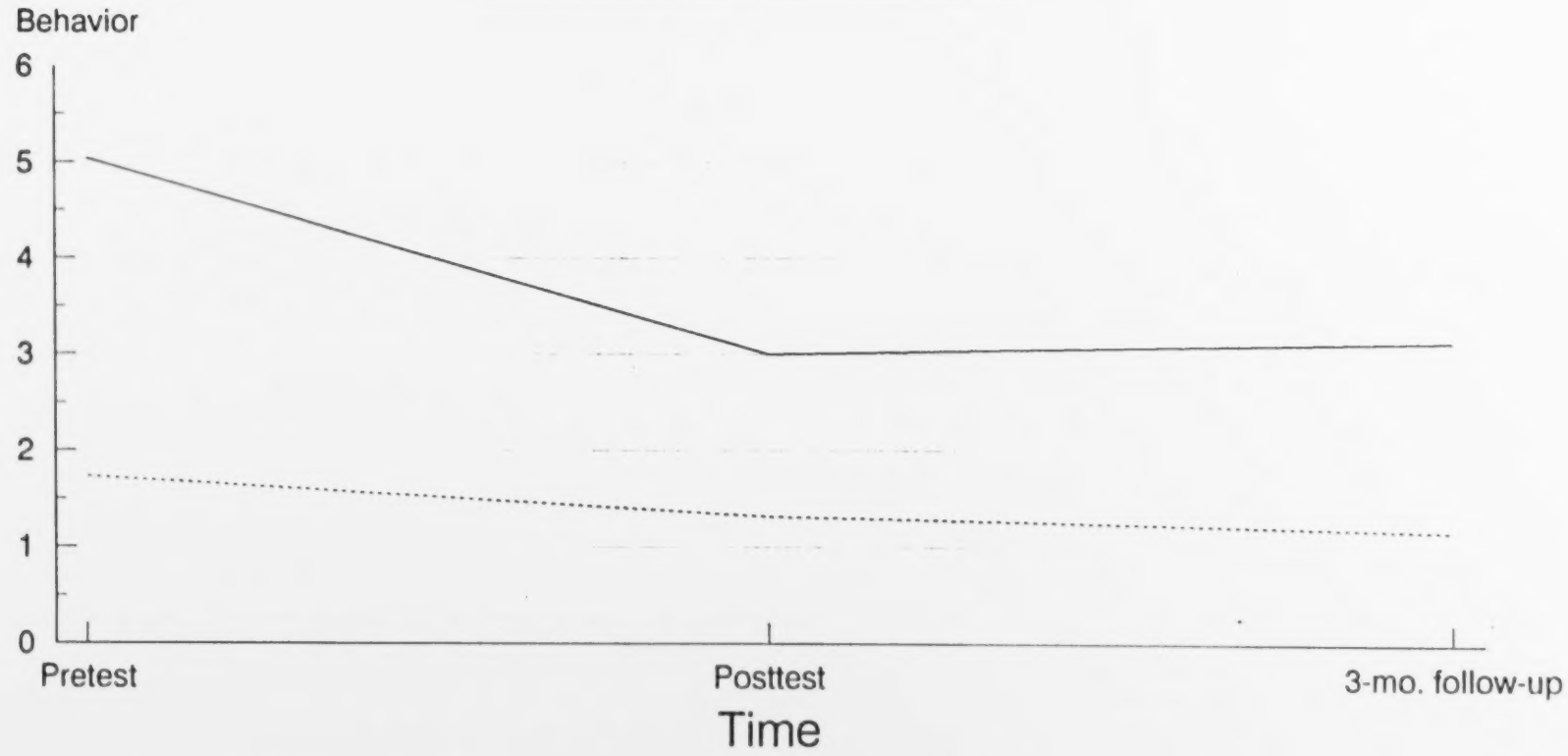

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Table 1

Study 1
Behavioral Techniques

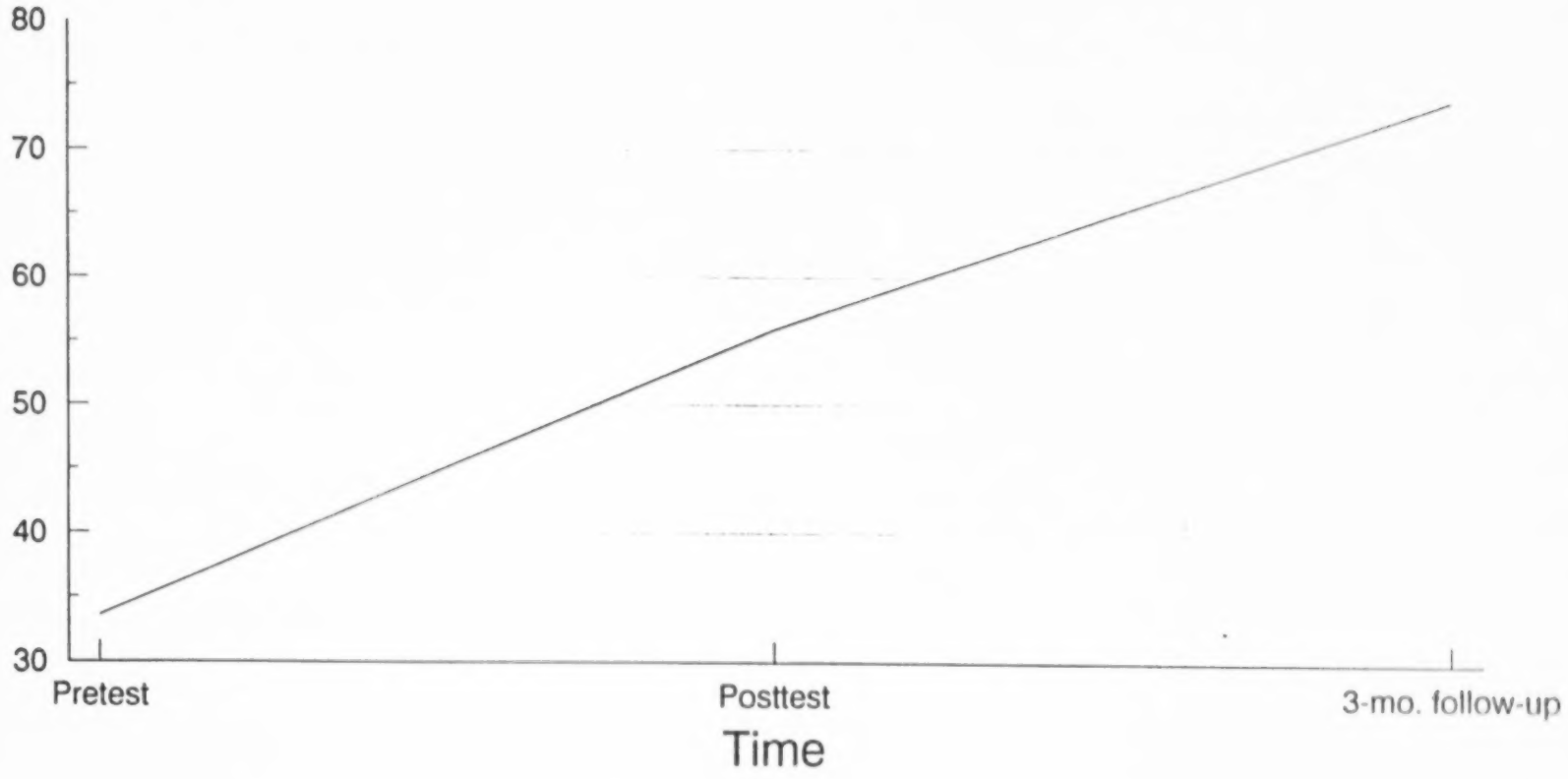

Table 2

Study 1
Master Questionnaire
Cognitive Scales

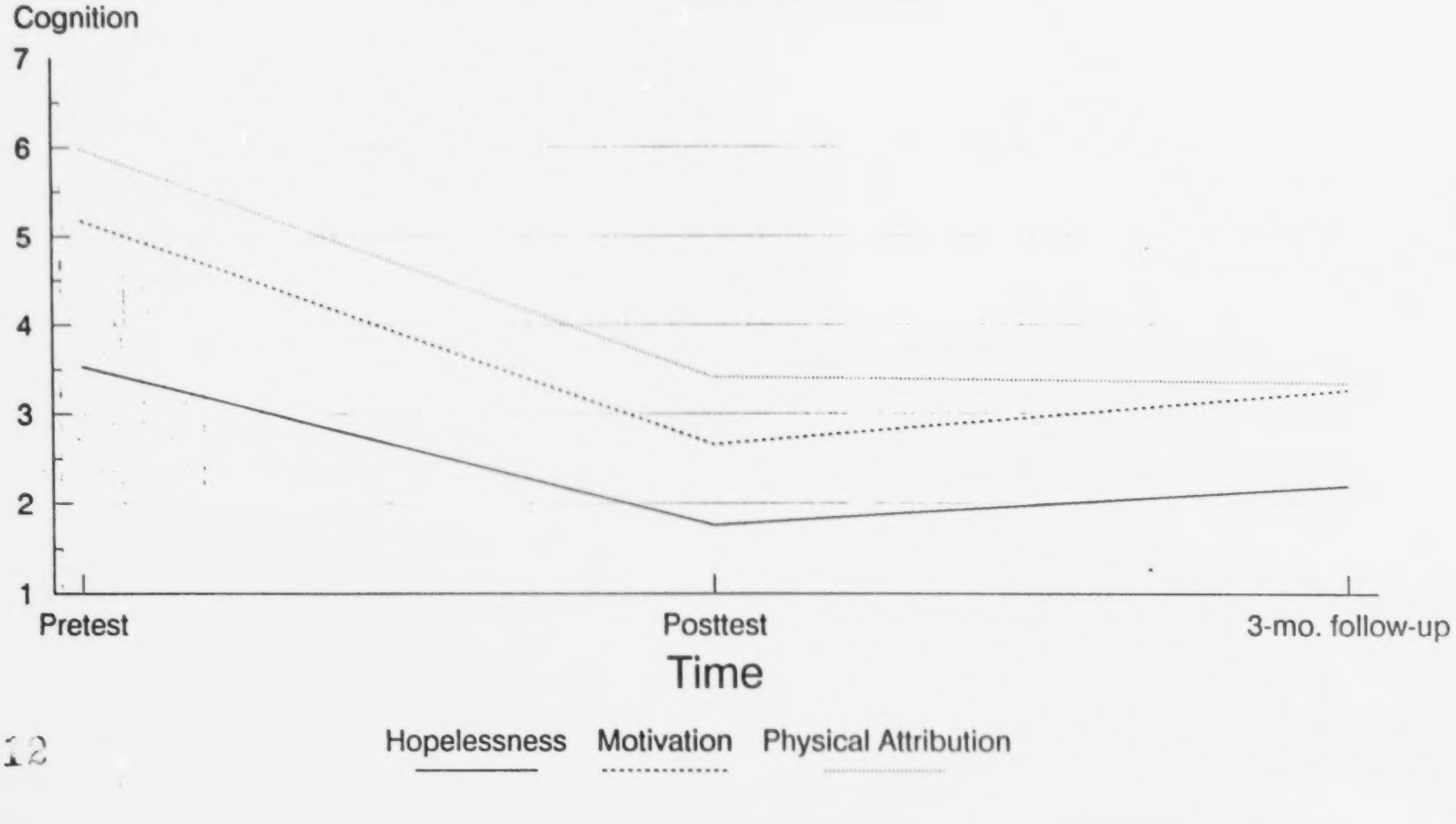

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Table 3

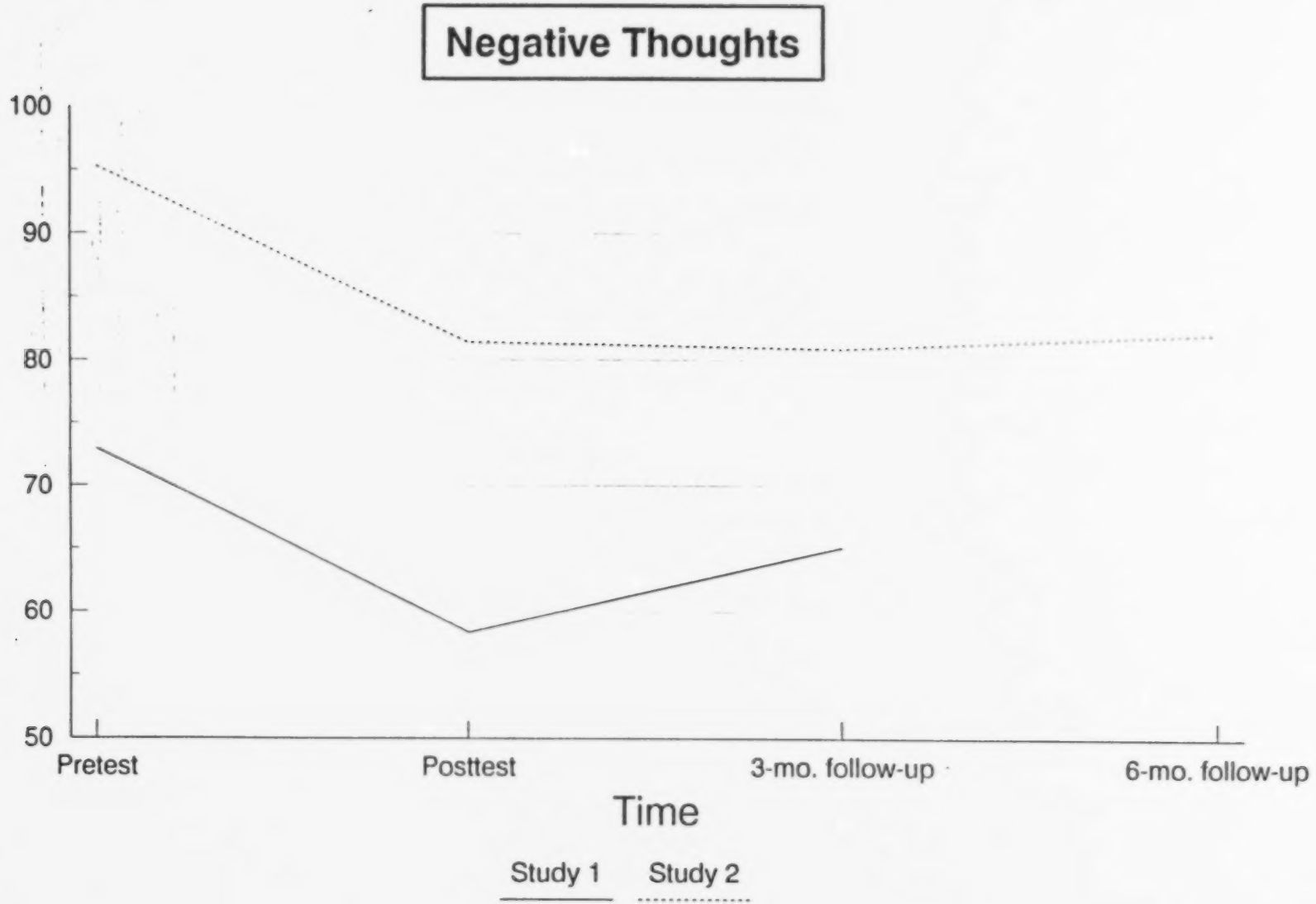
Negative Thoughts
100
90
80
70
60
50
Pretest
Posttest
3-mo. follow-up
6-mo. follow-up
Time
Study 1
Study 2

Table 4

Study 2
Master Questionnaire
Physical Attribution

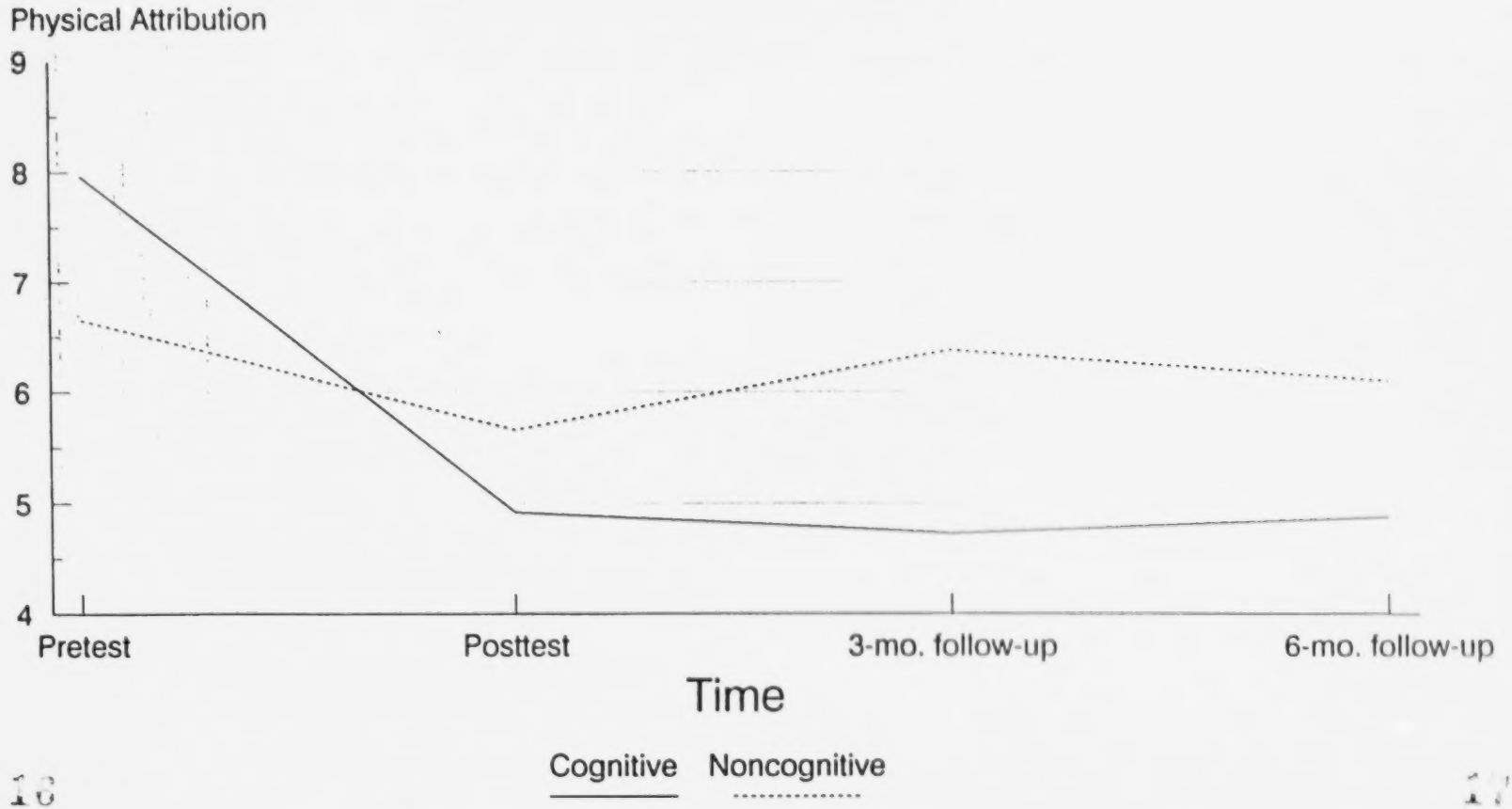

Table 5

Study 2
Master Questionnaire
Motivation

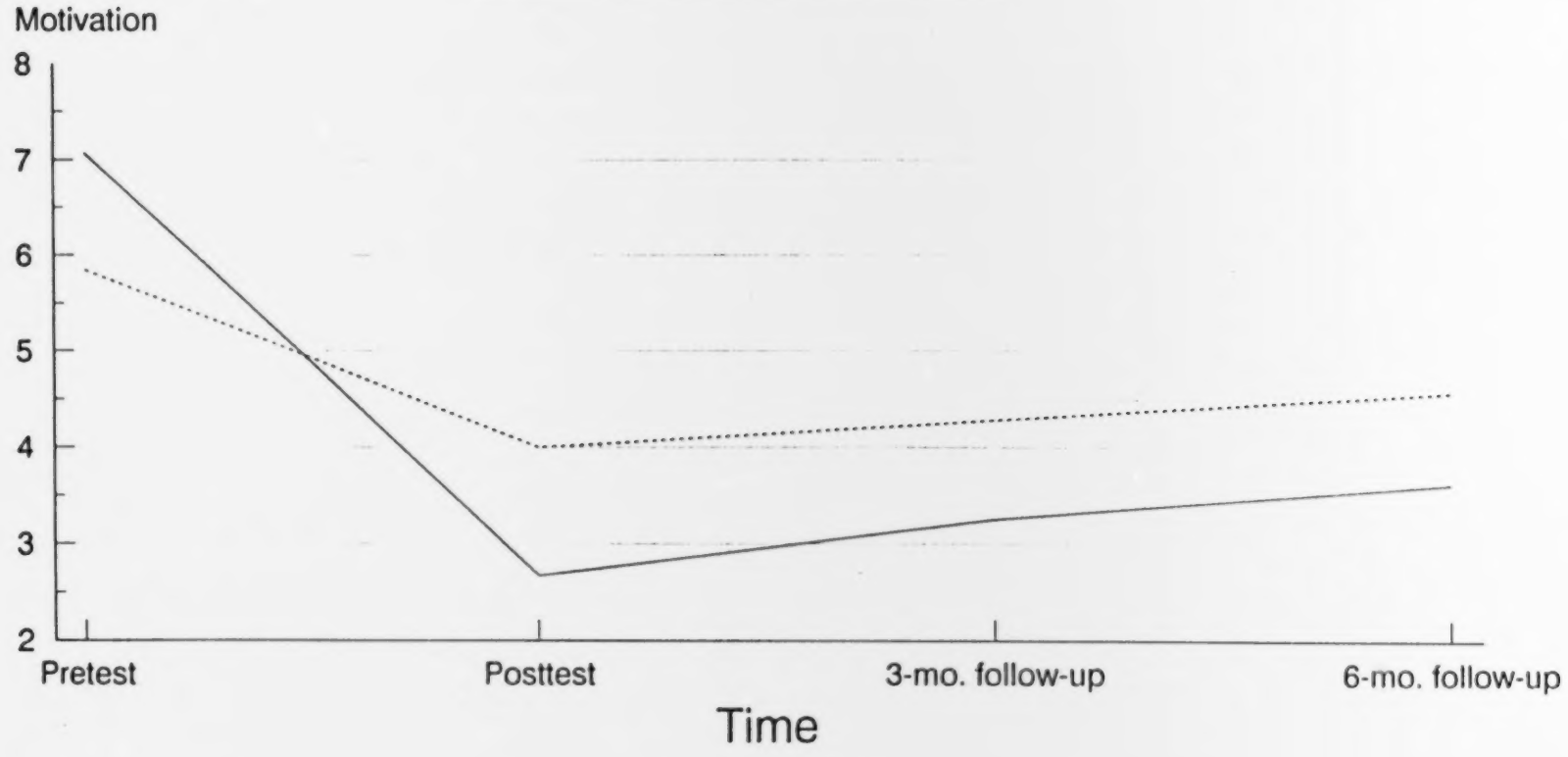

Table 6

Study 2
Behavioral Techniques

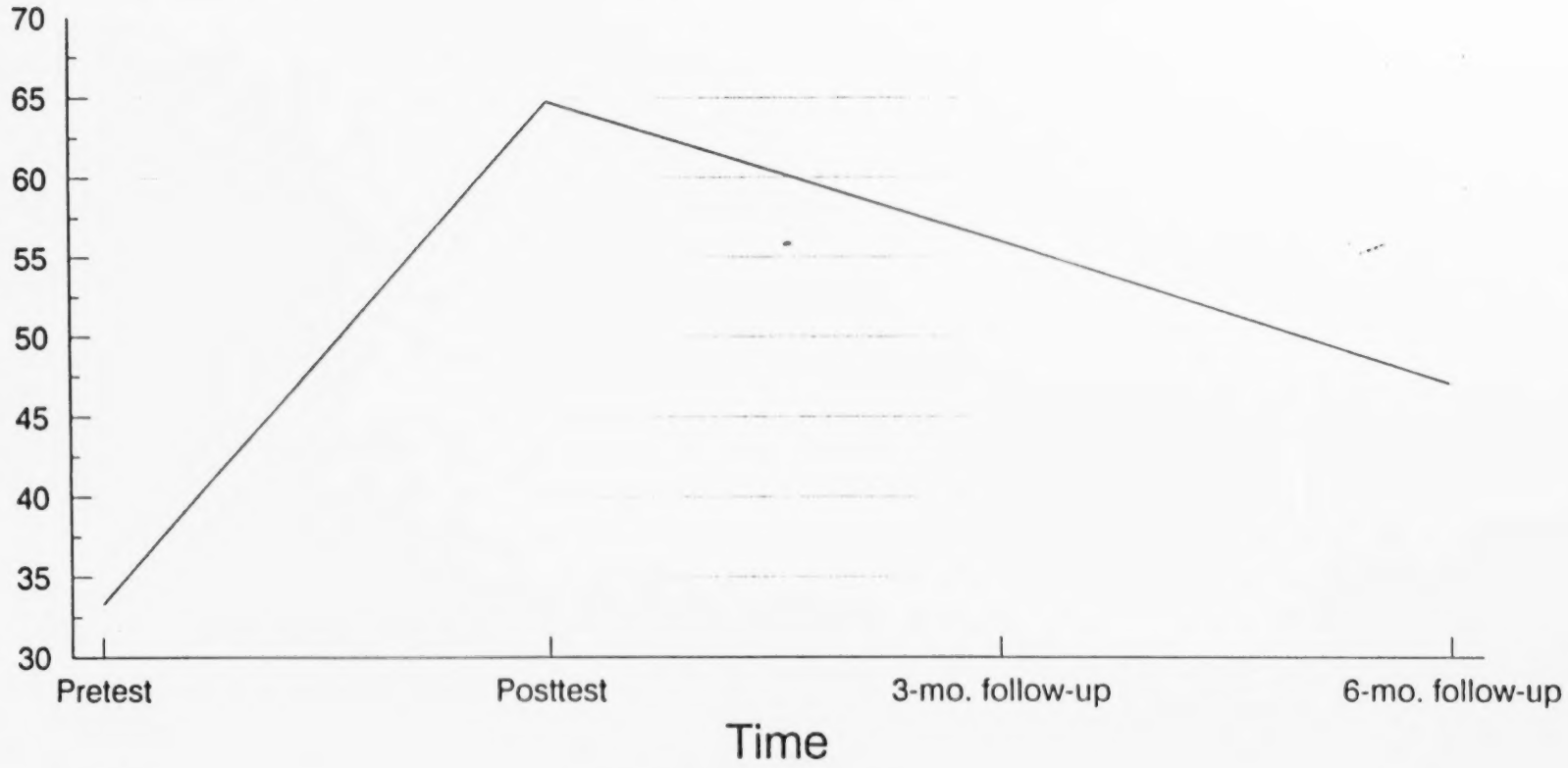

Table 7

Study 2
Master Questionnaire
Behavioral Scales

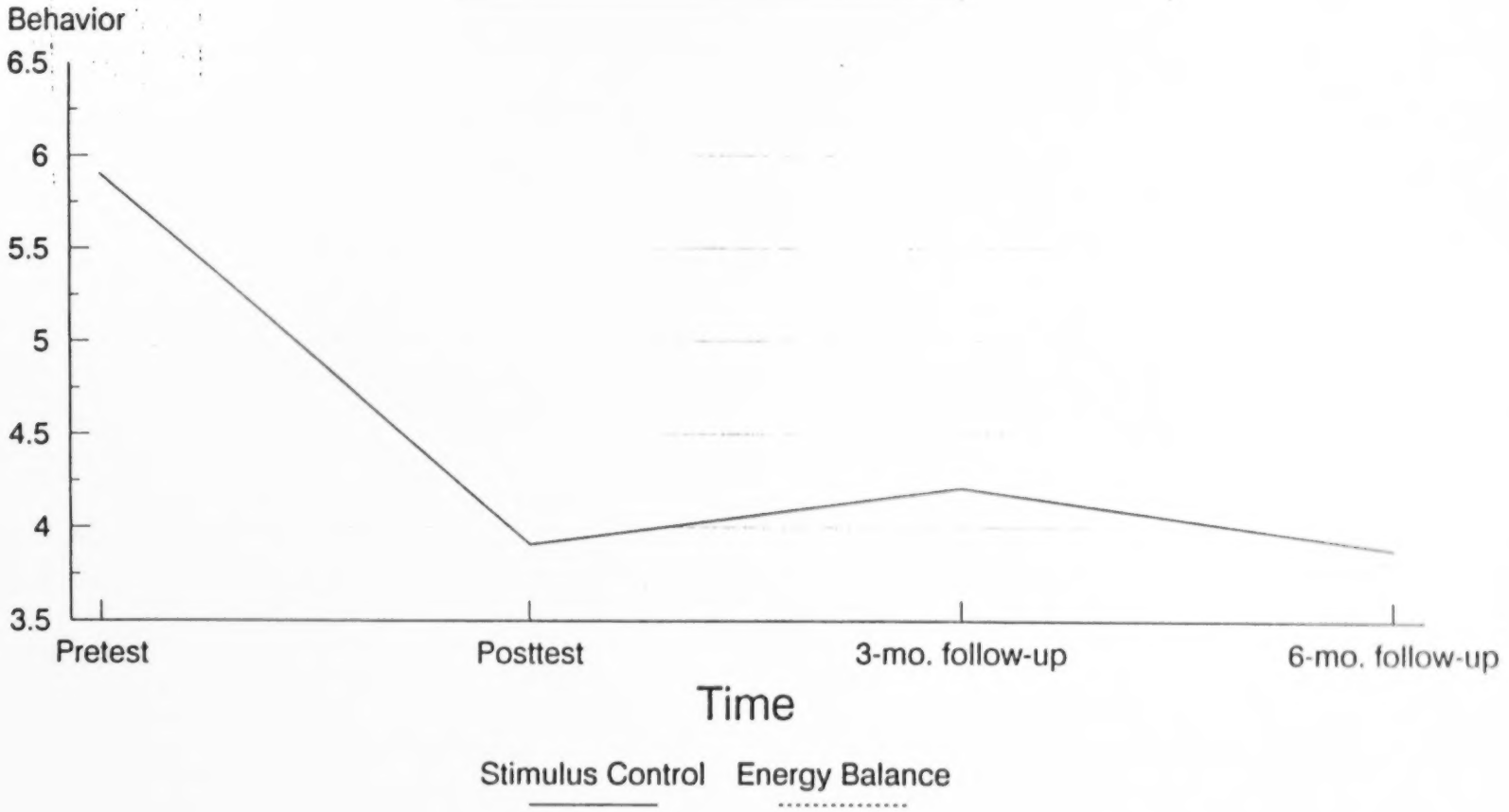

Table 8

Study 2
Master Questionnaire
Cognitive Scales

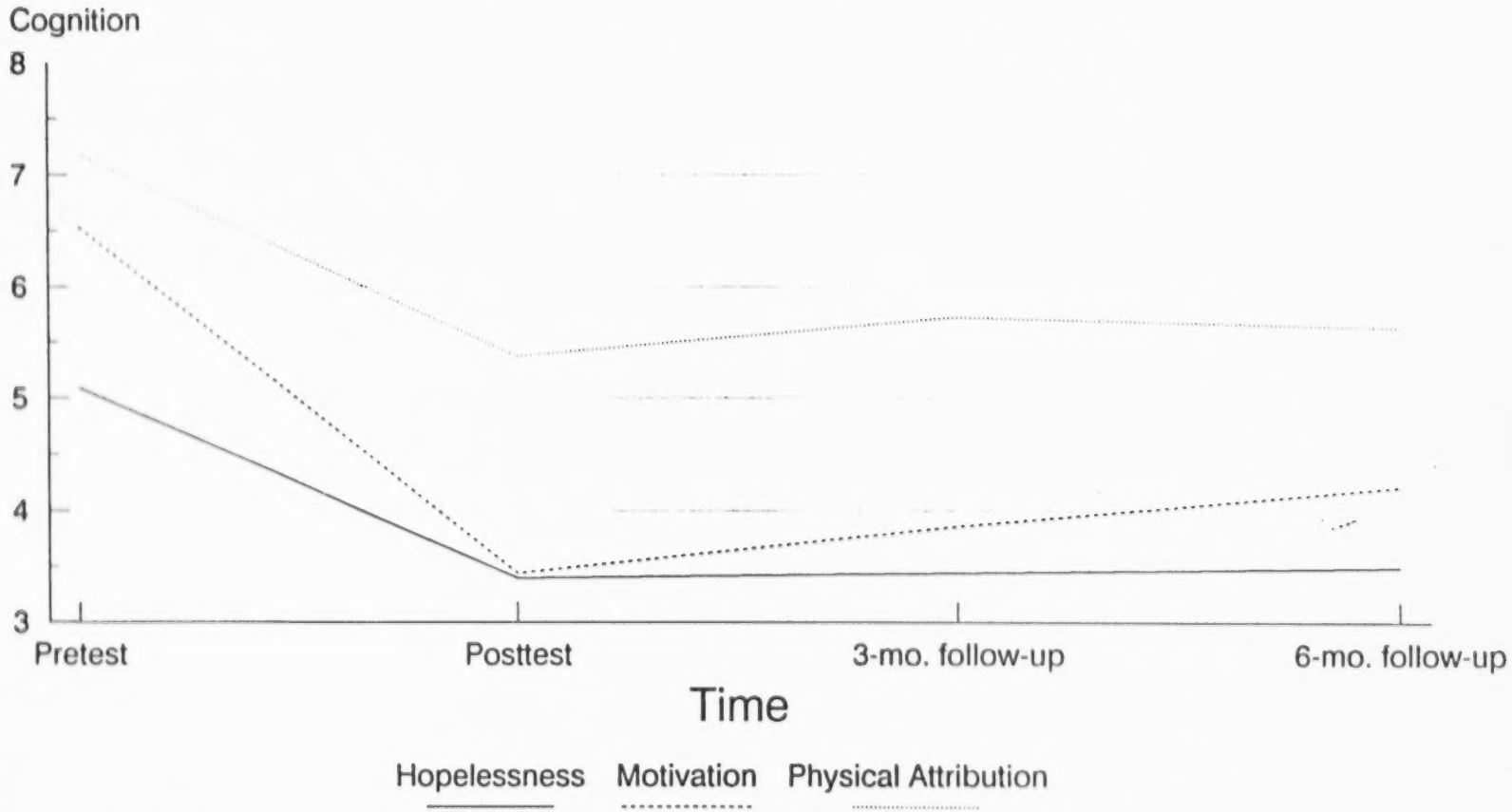

Table 9

Study 2
Eating Self-Efficacy

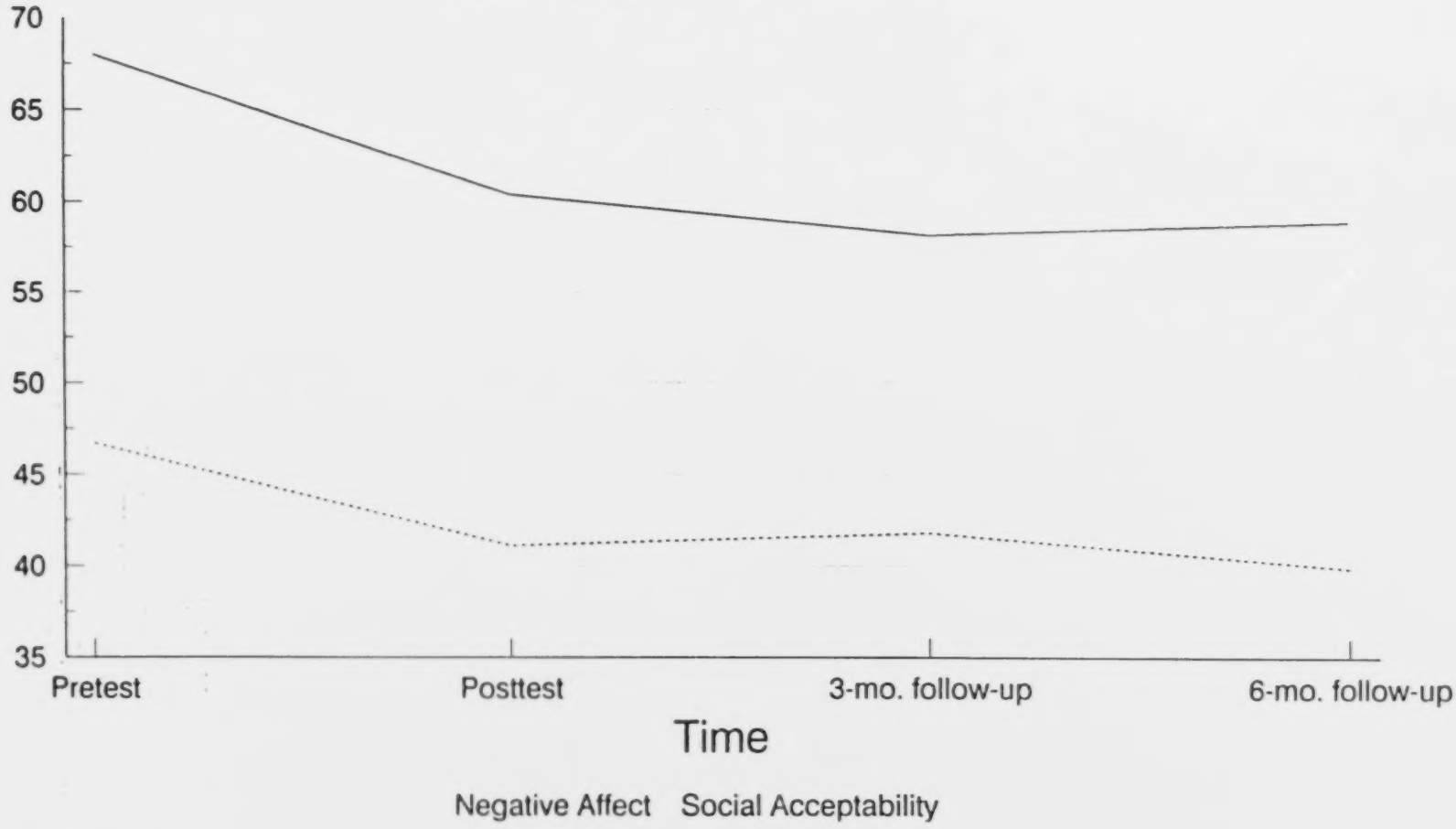

Table 10

Weight

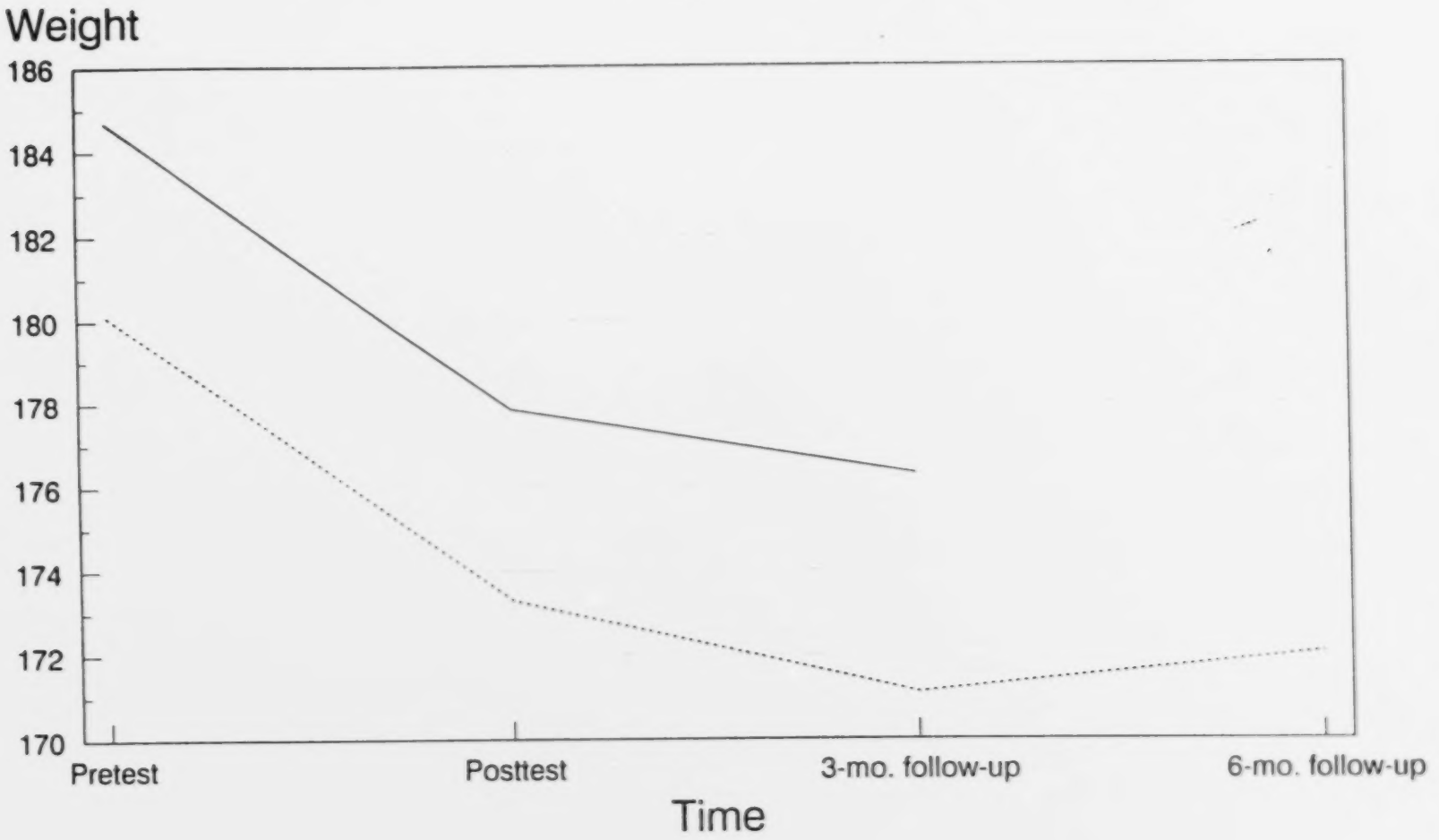

Table 11